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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/537,836	01/13/2006	Nigel P Robinson	020540	8682
23696 7590 06/24/2009 QUALCOMM INCORPORATED 5775 MOREHOUSE DR. SAN DIEGO, CA 92121				
EXAMINER ANWAR, MOHAMMAD S				
ART UNIT 2416		PAPER NUMBER		
NOTIFICATION DATE 06/24/2009		DELIVERY MODE ELECTRONIC		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary

Application No.

10/537,836

Applicant(s)

ROBINSON ET AL.

Examiner

MOHAMMAD ANWAR

Art Unit

2416

Period for Reply -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 April 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 9-11, 13, 15, 16, 25-27, 29 and 31-44 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 9-11, 13, 15, 16, 25-27, 29 and 31-44 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 4/15/09 has been entered.

Response to Arguments

1. Applicant's arguments with respect to claims 4/15/09 have been considered but are moot in view of the new grounds of rejection. Please see the new ground of rejections.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claims 9, 10, 15, 16, 25, 26, 31-34, 37-39, 41 and 43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wang (U.S. Patent No. 7,447,905 B2) in view of Lupien et al. (U.S. Patent No. 6,463,055 B1).

For claims 9, 25 and 33, Wang discloses a data transfer procedure for transferring data of a data sequence to a receiving entity data from a transmitting entity (see Figure 2) comprising : transferring down from a higher data handling layer of the transmitting entity to a lower data handling layer of the transmitting entity a plurality of data units of the data sequence, wherein each of the plurality of data units has a relative

position in the data sequence (see column 4 lines 64-65)); buffering, at the higher data handling layer of the transmitting entity, the plurality of data units (see column 5 lines 19-20); transmitting on a first transmission link from the lower data handling layer of the transmitting entity each of the plurality of data units to the receiving entity (see Figure 1, column 3 lines 59-67, column 4 lines 1-9); buffering, at the lower data handling layer of the transmitting entity, the plurality of data units (see Figure 4, 235, LLC Queue); sending a confirmation of receipt of the at least one later positioned one of the plurality of data units from the lower data handling layer of the transmitting entity to the higher data handling layer of the transmitting entity based on the acknowledgement (see column 5 lines 30-33); determining that the first transmission link is broken (see column 6 lines 24-25, LL-RESET indication); establishing a second transmission link between the transmitting entity and the receiving entity, discarding in-sequence any buffered data units at the higher data handling layer of the transmitting entity based on received confirmations (see column 6 lines 29-42); purging the buffered plurality of data units at the lower data handling layer of the transmitting entity upon determining the first transmission link is broken (see column 6 lines 25-26); maintaining the buffering of the at least one later positioned one of the plurality of data units and an earlier positioned one of the plurality of data units at the higher data handling layer of the transmitting entity, upon determining the first transmission link is broken, if at least an implied acknowledgement of receipt of the at least one earlier positioned one of the plurality of data units in the sequence is not received from the receiving entity at the lower data handling layer of the transmitting entity (see column 6 lines 29-43, SND CP

keeps unacknowledged pdus); and retransmitting, via the second transmission link the at least one earlier positioned one of the plurality of data units and the at least one later positioned one of the plurality of data units buffered at the higher data handling layer of the transmitting entity (see column 6 lines 43-45, lines 59-60); transmitting entity based on the acknowledgement (see paragraph 20 lines 8-14). Wang discloses all the subject matter but fails to mention receiving at the lower data handling layer of the transmitting entity an acknowledgement of receipt of at least one later positioned one of the plurality of data units from the receiving entity. However, Lupien et al. from a similar field of endeavor disclose receiving at the lower data handling layer of the transmitting entity an acknowledgement of receipt of at least one later positioned one of the plurality of data units from the receiving entity (see column 8 lines 36-40). Thus, it would have been obvious to one ordinary skill in the art at the time of invention was made to include Lupien et al. acknowledgement scheme into Wang layered transmission scheme.

For claims 10, 26 and 34, Wang discloses all wherein the higher data handling layer of the transmitting entity comprises a store for storing data units and further comprising maintaining buffered data units in the store until a corresponding acknowledgement of receipt has been received, when the corresponding data unit is then removed from the store (see column 5 lines 19-23).

For claims 15, 31 and 37, Wang discloses wherein the transmitting entity is a mobile station for a GPRS system (see column 2 line 41).

For claims 16, 32 and 38, Wang discloses wherein the higher data handling layer is an SNDCP layer and the lower data handling layer is an LLC layer (see Figure 2).

For claims 39, 41 and 43, Wang discloses wherein the higher data handling layer of the transmitting entity is arranged to maintain the buffering of the at least one later positioned one of the plurality of data units and an earlier positioned one of the plurality of data units based on a lower data handling layer of the receiving entity being restricted to passing complete data units in sequence up to a higher data handling layer of the receiving entity (see column 5 lines 19-22).

6. Claims 11, 27 and 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wang in view of Lupien et al. claims 9, 25 and 33 above, and further in view of Odman (U.S. PGPub. No. 2003/0210710 A1).

For claims 11, 27 and 35, Wang and Lupien et al. disclose all the subject matter but fails to mention wherein receiving the acknowledgement further comprises receiving an indication of the respective position of the at least one later positioned one of the plurality of data units. However, Odman from a similar field of endeavor disclose wherein receiving the acknowledgement further comprises receiving an indication of the respective position of the at least one later positioned one of the plurality of data units (see paragraph 29 lines 10-11).). Thus, it would have been obvious to one ordinary skill in the art at the time of invention was made to include Odman identification scheme into Wang and Lupien et al. transmission scheme. The method can be implemented in a

transmitter. The motivation of doing this is to efficiently handling fragmentation and burst transmission in wireless (see paragraph 2).

7. Claims 13, 29, 36, 40, 42 and 44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wang in view of Lupien et al. as applied to claims 9, 25 and 33 above, and further in view of Jalali et al. (U.S. Patent No. 6,694,469 B1).

For claims 13, 29, 36, 40, 42 and 44, Wang and Lupien disclose all the subject matter but fails to mention the transmitting entity waiting for a period of time for an acknowledgement of receipt of at least one of the plurality of segments data units from the lower data handling layer of the receiving entity; retransmitting the at least one of the plurality of data units; repeating the waiting and the retransmitting of the at least one of the plurality of data units; and deciding that the first transmission link is broken after the waiting and the re-transmitting of the at least one of the plurality of data units have been repeated a number of times. However, Jalali et al. from a similar field of endeavor disclose the transmitting entity waiting for a period of time for an acknowledgement of receipt of at least one of the plurality of segments data units from the lower data handling layer of the receiving entity; retransmitting the at least one of the plurality of data units; repeating the waiting and the retransmitting of the at least one of the plurality of data units; and deciding that the first transmission link is broken after the waiting and the retransmitting of the at least one of the plurality of data units have been repeated a number of times (see column 6 lines 46-58). Thus, it would have been obvious to one ordinary skill in the art at the time of invention was made to include Jalali et al.

retransmission scheme into Wang and Lupien et al. transmission scheme. The method can be implemented in a transmission device. The motivation of doing this is to retransmit packets a pre-determined number of times so that the buffer do not get full (see column 2 lines 27-29).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MOHAMMAD ANWAR whose telephone number is (571)270-5641. The examiner can normally be reached on Monday-Thursday, 9am-4pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Derrick W. Ferris can be reached on 571-272-3123. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

MOHAMMAD ANWAR
Examiner
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